

IN THE DRAWINGS

Replace Figures 2, 5, 8 and 10 with corrected Figures 2, 5, 8 and 10 in which the changes have been indicated in red ink on the attached for the Examiner's approval.

IN THE SPECIFICATION

Please replace the paragraph beginning at page 4, line 19 with the following:

Fig. 6 is a cross-sectional view of the flow control valve shown in Fig. 5 taken along lines 6-6;

Please replace the paragraph beginning at page 4, line 21 with the following:

Fig. 7 is a cross-sectional view of the flow control valve shown in Fig. 5 taken along lines 7-7;

Please replace the paragraph beginning at page 4, line 24 with the following:

Fig. 9 is a cross-sectional view of the valve sleeve shown in Fig. 8 taken along lines 9-9;

Please replace the paragraph beginning at page 4, line 27 with the following:

Fig. 11 is a cross-sectional view of the valve muscle shown in Fig. 10 taken along lines 11-11; and

Please replace the paragraph beginning at page 6, line 1 with the following:

Rotor 21 has an inner surface of rotor bowl 23 forming three zones: a migration zone, a retention zone and a lip zone, zones A, B and C respectively as described in U.S. Patent no. 4,824,431, which is incorporated herein by reference, which

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cause the denser, target particles from the slurry flow to be concentrated in the retention zone. The rotor 21 is mounted in the frame 3 by bearing assemblies 25. The rotor has a sheave 27 which is driven by a belt (not shown) driven by electric motor 9. The rotor is provided with hopper rings 35 and flow control valves 37, which will be described in further detail below. An impeller 28 is provided on the centre of the floor of bowl 23 which has three or four upstanding vanes to assist in the rotation of the slurry. A continuous 1/2 - inch slot 55 is formed in the surface of the retention zone B between the lower edge of the inner surface of lip 31 and the upper edge of the inner surface of lower bowl 30. Slot 55 opens to a series of mass-flow hoppers formed between two polyurethane hopper rings which hoppers in turn open to the flow control valves 37.

Please replace the paragraph beginning at page 7, line 10 with the following:

Flow control valves 37 are shown in detail in Fig. 3 through 11. They are generally "muscle valve", air controlled valves, modified versions of the type manufactured by The Clarkson Company. Each valve unit 37 consists of valve body 100, valve sleeve 102, valve muscle 104, end cap 106 and exit bushing 108. The valve body 100 is preferably cast from polyurethane plastic of hardness 75D and is relatively short in length to reduce particle acceleration in the valve. Each valve unit 37 has a central bore 110 formed in valve sleeve 102 which communicates with the hopper outlets. One end of sleeve 102 forms an annular flange 103 which is held in a corresponding depression 105 in valve body 100. Metal ring 115 is sealed at its end to valve body 100 and metal ring 117 is sealed to end cap 106 to retain the valve muscle 104 on either side of its central thicker area 119. The valve muscle 104 is slightly pre-compressed to fit in chamber 116. O-ring 107 seals between end cap 106 and valve body 100, and O-ring 109 seals the entrance to compressed air passage 112. Bolts 113, 125 secure the valve assembly to the machine, and screws 111 fasten the valve body 100 to end cap 106.

IN THE CLAIMS

Cancel claims 1-13. Add new claims 14-23 as follows:

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14. (New) A centrifugal concentrator for separating particulate material of higher specific